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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,982	08/23/2001	John W. Evans	97541.00011	2268

21832 7590 09/26/2007

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EXAMINER	
DELCOTTO, GREGORY R	

ART UNIT	PAPER NUMBER
1751	

MAIL DATE	DELIVERY MODE
09/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/935,982	EVANS ET AL.	
	Examiner	Art Unit	
	Gregory R. Del Cotto	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *RCE filed 7/19/07*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *30 and 40-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *30 and 40-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 30 and 40-45 are pending. Applicant's arguments and amendments filed 7/19/07 have been entered. Claims 1-29 and 31-39 have been canceled.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/19/07 has been entered.

Information Disclosure Statement

Note that, JP 06-033274, JP 06-158034, JP 54-155985, and JP 08-085782 have not been considered since no statement of relevance has been provided with respect to these references.

Objections/Rejections Withdrawn

The following objections/rejection(s) as set forth in the Office action mailed 4/19/07 have been withdrawn:

The rejection of claims 30 and 40-45 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9, 11, and 12 of 10/264041 and claims 22, 26, and 27 of 10/935897 has been withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 30 and 40-45 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With respect to claim 30, the specification as originally filed, provides no basis for "less toxic than 10,000 mg/kg on the basis of an acute LD_{50} oral toxicity" as recited by the instant claims. While the specification provides basis for 10,000 mg/kg, it does not provide basis for less toxic than 10,000 mg/kg which would actually encompass amounts such as 20,000 mg/kg, 50,000 mg/kg, 100,000 mg/kg, etc., and has no limit. Thus, this is deemed new matter. Note that, the Examiner asserts that the language "less toxic than 10,000 mg/kg on the basis of an acute LD_{50} oral toxicity" is simply another way of saying "greater than 10,000 mg/kg" as previously recited by instant claim 30.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 30 and 41-45 are rejected under 35 U.S.C. 102(b) as anticipated by WO 89/09806.

'806 teaches a coolant composition containing an alkylene glycol such as propylene glycol, a corrosion inhibitor combination of an azole such as tolyltriazole, a

molybdate salt and phosphoric acid, and less than 10% by weight water. See Abstract. The composition contains at least 90 weight percent of an alkylene glycol or a mixture of two or more alkylene glycols and a corrosion inhibiting amount of an inhibitor. This embodiment contains no water. See page 3, lines 1-15. Suitable alkylene glycols include ethylene glycol, propylene glycol, glycerol, and mixtures thereof and '806 teaches that the glycols may be used together in any proportion. See page 3, line 30 to page 4, line 12.

Specifically, '806 teaches a coolant composition containing 30 parts propylene glycol, 70 parts ethylene glycol, less than 1 part of water, 0.25 parts azole, 0.15 parts molybdate, and 0.075 parts phosphoric acid. See page 9. Note that, on page 28, lines 15-20 of the instant specification, Applicant states that even though the compositions may be non-aqueous, small amounts of water in amounts of about 0.5% may be included in the composition; compositions containing a low amount of water are specifically taught by '806. Note that, the Examiner asserts that the composition as specifically taught by '806 would inherently have the same reduced oral toxicity as recited by the instant claims because it teaches mixtures containing ethylene glycol and propylene glycol in the same proportions as recited by the instant claims. '806 discloses the claimed invention with sufficient specificity to constitute anticipation.

Accordingly, the teachings of '806 anticipate the material limitations of the instant claims.

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 89/09806.

'806 is relied upon as set forth above. However, '806 does not teach, with sufficient specificity, a method of reducing the oral toxicity of nonaqueous fluids containing ethylene glycol by mixing with ethylene glycol a specific polyhydric alcohol such as glycerol in the specific proportions as recited by the instant claims.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to reduce the oral toxicity of nonaqueous fluids containing ethylene glycol by mixing with ethylene glycol a specific polyhydric alcohol such as glycerol in the specific proportions as recited by the instant claims, with a reasonable expectation of success, because the teaching of '806 suggest reducing the oral toxicity of nonaqueous fluids containing ethylene glycol by mixing with ethylene glycol a specific polyhydric alcohol such as glycerol in the specific proportions as recited by the instant claims.

Claims 30 and 40-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer et al (US 5,118,434) or Maes et al (US 5,366,651).

Meyer et al teach antifreeze fluids containing 50 to 99 percent by weight of one or more glycols, 0.001 to 15 percent by weight of one or more corrosion inhibitors, 25 to 2500 arts of a polymeric additive, and optionally, up to 50 percent by weight of water. See column 1, line 50 to column 2, line 5. Suitable glycols include ethylene glycol, propylene glycol, etc. See column 2, lines 40-60.

Maes et al teach antifreeze concentrates containing a water-soluble liquid alcohol freezing point depressant and a corrosion inhibitor comprising carboxylic acids or their salts and a triazole compound. See column 2, lines 55-69. Suitable freeze point depressants include glycols such as ethylene glycol, propylene glycols, etc.

Note that, the Examiner asserts that the broad teachings of Meyer et al or Maes et al would suggest compositions having reduced toxicity because Meyer et al or Maes et al suggest compositions containing the same components in the same proportions as recited by the instant claims.

Meyer et al or Maes et al do not teach, with sufficient specificity, a method of reducing the oral toxicity of nonaqueous fluids containing ethylene glycol by mixing with ethylene glycol a specific diol such as propylene glycol in the specific proportions as recited by the instant claims.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to reduce the oral toxicity of nonaqueous fluids containing ethylene glycol by mixing with ethylene glycol a specific diol such as propylene glycol in the specific proportions as recited by the instant claims, with a reasonable expectation of success, because the teaching of Meyer et al or Mae et al suggest reducing the oral toxicity of nonaqueous fluids containing ethylene glycol by mixing with ethylene glycol a specific diol such as propylene glycol in the specific proportions as recited by the instant claims.

Claims 30 and 40-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood (US 4,455,248).

Wood teaches a specific combination of corrosion inhibitors for glycol-based antifreeze formulations which provides protection of aluminum from corrosion under high temperature service conditions without sacrificing the corrosion protection of other metals or the other properties required of suitable antifreeze formulations. Suitable

glycols include ethylene glycol, propylene glycol, glycerol, etc., and mixtures thereof. See column 2, lines 47-69. The composition optionally contains water and for convenience in handling and storage, the antifreeze may be formulated as a concentrate containing little or no water. Clearly, Wood teaches compositions that may be non-aqueous. Even if the composition does contain water, Wood teaches that the composition may contain as little as 0.1 parts by weight of water for every 100 parts by weight of said alcohol which would fall within the amount of water permissible by the definition of "non-aqueous" given on page 28 of the specification.

Note that, the Examiner asserts that the broad teachings Wood would suggest compositions having reduced toxicity because Wood suggests compositions containing the same components in the same proportions as recited by the instant claims.

Wood does not teach, with sufficient specificity, a method of reducing the oral toxicity of nonaqueous fluids containing ethylene glycol by mixing with ethylene glycol a specific diol such as propylene glycol in the specific proportions as recited by the instant claims.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to reduce the oral toxicity of nonaqueous fluids containing ethylene glycol by mixing with ethylene glycol a specific diol such as propylene glycol in the specific proportions as recited by the instant claims, with a reasonable expectation of success, because the teachings of Wood suggests reducing the oral toxicity of nonaqueous fluids containing ethylene glycol by mixing with ethylene glycol a specific diol such as propylene glycol in the specific proportions as recited by the instant claims.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 30 and 40-45 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 27-50 of 09/910497. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 27, 40-42, and 44-50 of 10/910497 encompass the material limitations of the instant claims.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to reduce the oral toxicity of aqueous fluids containing ethylene glycol by mixing with ethylene glycol a specific diol such as propylene glycol in the specific proportions as recited by the instant claims, with a reasonable expectation of success, because claims 27, 40-42, and 44-50 of 09/910497 suggest reducing the oral toxicity of aqueous fluids containing ethylene glycol by mixing with ethylene glycol a specific diol such as propylene glycol in the specific proportions as recited by the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

With respect to the limitation "is less toxic than 10,000 mg/kg on the basis of an acute LD50 oral toxicity in rats", Applicant states that this amendment is supported in the specification as the Examiner noted in the previous Office action. In response, the Examiner asserts that while it was previously stated that the specification did provide basis for "10,000 mg/kg", the Examiner maintains, as set forth above, that the specification does not provide basis for "is less toxic than 10,000 mg/kg on the basis of an acute LD50 oral toxicity in rats"; this is merely another way to say "greater than 10,000 mg/kg" as previously recited by instant claim 30.

With respect to '806, Applicant states that '806 does not enable one skilled in the art to practice the methods as recited by the instant claims and all the embodiments disclosed in Remy, including the example of a mixture of ethylene glycol and propylene glycol, contain water added to the alkylene glycol and the addition of solutions of phosphoric acid. Further, Applicant states that Remy does not teach or suggest a fluid that contains no additives that require the presence of added water in the fluid as now recited by the instant claims. Also, Applicant also states that at page 3, lines 1-15 of '806, '806 discloses compositions which are not complete which contain water and requires ingredients that require the presence of added water. Further, Applicant states that '806 does not even mention oral toxicity, much less teach or suggest a solution to that problem. In response, the Examiner asserts, as stated previously, that page 3,

lines 1-15 of '806 would suggest compositions containing no water and thus, these compositions do not contain additives that require water in the fluid to dissolve the additive as recited by the instant claims. The reference has been read in context and the Examiner believes the composition is complete. To strengthen the Examiner's position, '806 states that the alkylene glycol is used with essentially no water on page 5, lines 25-35. Additionally, the Examiner asserts that '806 clearly teaches compositions which contain little or no water as indicated on page 9, where compositions containing less than 1% by weight water are disclosed. Also note that, "non-aqueous" as recited by the instant claims is defined in the specification as allowing for the inclusion of some water as stated on pages 28 and 29 of the specification.

Furthermore, Applicant states that the Examiner overlooks the requirement at page 3, lines 6-7 of Reny et al that the heat transfer fluids contain "from 0 to 3 weight parts of phosphoric acid". In response, note that, clearly Reny et al specifically teach embodiments contain no phosphoric acid and thus, specifically teach embodiments which contain no additive that requires water in the heat transfer fluid to dissolve the additive or to enable the additive to function as recited by the instant claims. Additionally, the Examiner maintains that the composition as specifically taught by '806 would inherently have the same reduced oral toxicity as recited by the instant claims because it teaches mixtures containing ethylene glycol and propylene glycol in the same proportions as recited by the instant claims. Note that, the discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition

patentably new to the discoverer. Atlas Powder Co. V. Ireco Inc., 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Thus, the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977); In re Crish, 393 F.3d 1253, 1258, 73 USPQ2d 1364, 1368 (Fed. Cir. 2004). See MPEP 2112.

With respect to Meyer, Maes et al, or Wood, Applicant once again states that these references do not describe a method for reducing the oral toxicity of an ethylene glycol based heat transfer fluid by adding a second glycol as recited by the instant claims. Further, Applicant states that Meyer, Maes et al, or Wood do not provide a description that would allow one skilled in the art to practice the methods of claims 30 and 40-45 without undue experimentation. In response, note that, the Examiner asserts, as stated previously, that Meyer, Maes et al, or Wood, clearly suggest compositions having the same reduced toxicity as the recited by the instant claims because Meyer, Maes et al, or Wood suggest compositions containing the same components in the same proportions as recited by the instant claims. Additionally, although Meyer, Maes et al, or Wood do not make specific mention of reduced toxicity properties, the reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by applicant. See MPEP 2144; In re Linter, 458 F.2d 1013, 173 USPQ 560 (CCPA 1972). Furthermore, with respect to the proportions of ethylene

glycol and propylene glycol as recited by the instant claims, the Examiner asserts that one skilled in the art would have been motivated to formulate compositions containing ethylene glycol and propylene glycol in the specific proportions as recited by the instant claims because the teachings of '806, Meyer, Maes et al,or Wood suggest compositions containing ethylene glycol and propylene glycol in the specific proportions as recited by the instant claims. Note that, each reference teaches various combinations of glycols in varying proportions.

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Remaining references cited but not relied upon are considered to be cumulative to or less pertinent than those relied upon or discussed above.

Applicant is reminded that any evidence to be presented in accordance with 37 CFR 1.131 or 1.132 should be submitted before final rejection in order to be considered timely.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory R. Del Cotto whose telephone number is (571) 272-1312. The examiner can normally be reached on Mon. thru Fri. from 8:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gregory R. Del Cotto
Primary Examiner
Art Unit 1751

GRD
September 22, 2007